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MEETING NOTES

TO: Distribution

DATE: December 22, 1993

FROM: Philip Nixon

MEMO #: SP307:122393:01

PROJECT #: Solar Pond IM/IRA

ATTENDANCE:

Mark Austin, EG&G
Phil Nixon, ES
Sandy Stenseng, ES
Terry Evans, ES
Steve Hughes, ES

DISTRIBUTION:

Attendees
R. Ogg
L. Ruger
B. Wallace
D. Ericson
A. Conklin
P. Breen
H. Heidkamp
K. Cutter
R. Stegen
D. Kennedy
T. Kuykendall
C. Montes
D. Creek
R. Wilkinson
S. Cole
W. Edmonson
D. Myers

SUBJECT: Weekly Status Meeting

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1) Engineered Cover Design

The question was raised as to our conceptual level configuration for the cover(s). It was explained that the conceptual level first run analysis would begin with three separate covers, one over the "C" Pond, one over the "A" Pond and one covering all three "B" Ponds. The reason for three separate covers is to minimize the surface drainage areas to reduce the anticipated erosion over the 1,000 year design period. Reducing the surface area draining to any one drainage path will lower the flow and therefore result in less surface sediment migration (erosion).

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD

A-0U04-000658

Mark Austin inquired about the 3 separate cover system (for the conceptual level design) that ES had brought up for discussion in the team weekly meeting held on December 21, 1993. Mark asked for a design concept of the drainage and cover components expected to cover the areas between the existing pond berms. Sandy Stenseng explained that the 3 separate cover theory was based on the assumption that there would be no contaminated material remaining between the ponds which would require a full cover system, and that there may be utilities underlying these areas that may need to be accessed in the future. It would be feasible to breach topsoil, filter layers, biotic barriers and drainage materials to access and repair underlying utilities. However to breach any hydraulic barriers would probably cause concern as to the long-term integrity of the covers since it is not always possible to repair liners or hydraulic barriers with an impermeable bond that will avoid future drainage paths. Sandy explained that in the event that the areas between the berms require a full cover system, the entire pond area would, in essence, be covered by one continuous cover system with differing slopes and drainage paths. All components of the cover system would be integrated (uninterrupted) over the entire 5-pond area and the top slopes and interior slopes will be designed to minimize drainage pathway lengths. At present it is anticipated that there will be a swale between the C pond and the A pond and another between the A pond and the B ponds. The design intent at this point is to divert the surface and intercap flows to several different drainage paths to keep the flows and velocities as low as possible. This would reduce erosion due to sediment migration, particularly in the event of a 1,000-year design life. Sandy also brought up the issue that perimeter swales, berms and grouted riprap chutes may be incorporated into the surface water control system to handle surface flows in a manner that would reduce runon into the cover areas and divert runoff in a controlled manner to avoid damage from water erosion. It was also explained that in the event of a 1,000-year life criteria the toe drain system would probable utilize a gravel trench drain system and would not use perforated pvc pipe.

The design of the engineered cover is contingent upon the selection of the cover alternative. If the Hakonson cover is shown to be protective of human health and the environment, then there may not be any advantage gained by excavating and consolidating pond liners in any specific SEP. If, however, the alternative utilizing a low permeability layer is necessary, then it is likely that ES will consider placing the liner from 207-B North, the north half of 207-A, and perhaps 207-C pond into the other SEPs prior to closure. This would reduce the areal extent of the full cover. The other excavated areas would be considered "clean closed" and would only require backfill and seeding.

The north hillside will require geotechnical testing and may require stabilization as part of the design. ES is considering terracing the hillside to provide a stabilized area for the engineered cover.

2) Utilities

Mark Austin requested that ES abandon the storm sewer that runs under Building 788., It was discussed that relocating the stormwater could be a significant effort in that there are numerous other utilities and structures in the area and space is limited. ES will investigate providing a drainage ditch for the combined flow of plant stormwater and runoff

from a section of the engineered cover. The existing 15-inch sewer line will be closed and grouted in-place.

3) **System Classification**

Mark Austin will take the lead on identifying the system classification with respect to the *Conduct of Engineering Manual* (COEM, 2-80000-COEM-3.1.1, Section 6.3.6). EG&G will likely consider the engineered cover as a non-nuclear facility.

4) **Design Basis Document**

Mark Austin indicated that the combination of the IM/IRA and the Design Basis Document will fulfill the requirement for an Operational Requirements document.

Philip Nixon, Project Manager